Improving customer experience in the cruise industry in the post pandemic era

Panagiotis Manolitzas, Niki Glaveli, Stergios Palamas, Evangelos Grigoroudis & Constantin Zopounidis

Published online: 13 Nov 2022.

Submit your article to this journal

Article views: 2329

View related articles

View Crossmark data

Citing articles: 1 View citing articles

*Corresponding author: Panagiotis Manolitzas, Department of Tourism, Ionian University, Corfu, Greece
Email: pmanol@gmail.com

MANAGEMENT | LETTER

Improving customer experience in the cruise industry in the post pandemic era

Panagiotis Manolitzas[1]*, Niki Glaveli[2], Stergios Palamas[3], Evangelos Grigoroudis[4] and Constantin Zopounidis[4]

Abstract: The current research re-examines cruisers' satisfaction in the context of online user generated content extracted from CruiseCritics through the application of Multicriteria Satisfaction Analysis Method (MUSA). MCDA methods evaluate alternative courses of action with respect to criteria that reflect the main dimensions of the decision-making problem, involving human judgment and preferences. More precisely, the present work illustrates an evidence-based decision-making approach in the areas of quality management and cruisers' satisfaction and reveals valuable information to the decision-makers like global satisfaction indices, criteria weights and action diagrams to assist them restart and improve the performance of the cruise industry at the post pandemic era. Specifically, the analysis elucidated that the cruise industry players should reconsider the "value for money" aspect of their offering, continue investing in areas of service quality like cabins, service, and dining and closely monitor the fitness recreation, entertainment, and enrichment aspects of the cruisers' experience.

Subjects: Tourism; Quality Management; Consumer Behaviour

Keywords: cruise industry; cruise critics; cruiser satisfaction; MCDA/ MUSA; decision making

1. Introduction and theoretical background

According to Hsu and Li (2017) cruise tourism was one of the most rapidly developing and profitable sectors in the tourism industry. Nevertheless, the spread of the COVID-19 pandemic had a negative impact on this upturn (Radić et al., 2020). Based on a recent report of CLIA (Cruise Lines International Association; 2022) the COVID-19 pandemic diminished passengers' embarkations from 29.7 to only 5.8 millions, while cruise supported jobs decreased by 51%. All in all, it could be claimed that the cruise industry is a rather crisis-prone one (Radić, 2015). Indeed, 9/11 terrorist attacks, the 2008 global financial crisis, as well as the H1N1, norovirus and legionnaires' pandemics, are just few of the paradigms that have struck the sector (Klein et al., 2017; Mileski et al., 2014; Mouchtouri & Rudge, 2015; Radić et al., 2020). The previous ascertainment suggests that players in this industry need to be constantly alert and aware of their customers' changing needs and satisfaction with the cruising experience in order to be competitive and obtain a profitable share of the market.

Considering the above, in the present work we argue that the stakeholders of the cruise industry need to use reliable data and decision support tools that can assist them in: i) improving the effectiveness of the decision-making process in the areas of quality management and cruisers' satisfaction and ii) designing cost-effective interventions to cope with and recover (particularly) after lean times, such as the pandemic era. Online user generated content (UGC), i.e., satisfaction

ratings and comments on cruise critic websites are sources of rich and trustworthy data on aspects of the cruise experience that customers value. Moreover, UGC can act as e-word of mouth affecting the decision-making process and choice of cruise passengers. So, researchers across the globe have started to utilize this type of data and have applied different methods in order to extract valuable information for decision-makers in the sector.

More specifically, Kwortnik (2008) was amongst the first who used a data set that captures 260 unique cruiser qualitative comments across 63 threads from an online platform. Data were analyzed based on grounded theory and interpretive methods. The study revealed that novel atmospheric and social effects are the most important factors that influence cruisers' perceptions of their travel experience. Zhang et al. (2015) used 44,993 customer reviews of 167 vessels on a cruise guide website and conducted stepwise regression analysis to investigate the effect of ship (i.e., tonnage, decks, cabins, public rooms) and experience attributes performance (i.e., dining, service, embarkation, entertainment, spa and fitness, shore excursions and price) on customer satisfaction and dissatisfaction. The findings empirically confirm the validity of the two-factor theory of customer satisfaction in the cruise tourism context which suggests that dissatisfaction is not the opposite of satisfaction but rather a distinct construct (Herzberg et al., 1959). Service, public rooms, shore excursions, dining, price, spa and fitness and entertainment were found to be satisfiers (i.e., attributes that can surprise the cruiser and create higher added value), whilst service, public rooms, shore excursions, dining, price, embarkation, and deck can operate as dissatisfiers (i.e., attributes that increase satisfaction levels if they are fulfilled and reduce satisfaction levels if they are not fullfilled). Castillo-Manzano and López-Valpuesta (2018) reviewed 105,000 passenger ratings of 134 vessels. Data analysis using Ordinary Least Square (OLS) showed a negative relationship between vessels' gigantism, modern design and cruisers' satisfaction and a positive relationship of cruisers' satisfaction with two groups of factors: the cruise line experience and the vessel's intrinsic characteristics. Buzova et al. (2019) performed thematic content analysis on 1296 cruise passengers' narratives regarding their shore guided experience. The results of the study revealed that the dominant themes of the delighted cruise passengers related to the performance of the tour guide, the arrangement of the tour, as well as the cruise destination sightseeing. On the other hand, those unsatisfied with their onshore experience underlined crowded bus tours, limited time at the port of call, and inadequate excursion design as the major aspects of their disappointment. Arasli et al. (2020) utilised sentiment analysis to evaluate the online narratives of 2000 guests and underlined 10 areas associated with cruisers' satisfaction (e.g., ship, staff, food). Whilst, Castillo-Manzano et al. (2022) applied both a graphic and an econometric technique on over 150,000 online cruisers' reviews regarding their satisfaction. They found that cruisers' loyalty behavior is affected by multiple onboard attributes, such as the service crew, entertainment options, type of cabin and some characteristics of the ship and the cruise line.

Based on the above presented studies' methods, findings, underlined limitations and avenues suggested for further research we could support that the relevant research: i) needs to be enriched with analysis techniques (such as multicriteria analysis) that listen to the voice of the cruiser and can turn it into valuable information for effective evidence-based decision-making in the area of service quality and customer satisfaction (Kwortnik, 2008; Castillo-Manzano et al., 2022, ii) should focus on possible factors that are important for customer overall satisfaction (Zhang et al., 2015) and iii) must take advantage of the rich and reliable online data provided by quantitative cruisers' reviews in order to assess cruisers satisfaction patterns from online user generated ratings. In the current paper, we attempt to fill these gaps by re-examining cruisers' satisfaction though the application of MUlticriteria Satisfaction Analysis (MUSA) on online user generated satisfaction ratings retrieved from a well-known cruise review website.

2. Method

The MUSA method belongs to the aggregation-disaggregation approach of multicriteria analysis. The philosophy of preference disaggregation in multicriteria decision analysis (MCDA) systems is to assess/infer global preference models from the given preferential structures and to address

decision-aiding activities (Jacquet-Lagreze & Siskos, 2001). More precisely, the MUSA system is a customer-based tool for service/product quality evaluation and is used for the assessment of a set of marginal satisfaction functions in such a way that the global/overall satisfaction criterion becomes as consistent as possible with customer's judgments. Thus, the main objective of the method is the aggregation of individual judgments into a collective value function. MUSA approaches customer satisfaction as a business "problem" (e.g., how to improve cruisers' overall satisfaction) assuming that its optimal solution involves multiple criteria representing service characteristic dimensions.

The criteria adopted in the present study represent the attributes of the cruise experience provided by CruiseCritic (https://boards.cruisecritic.com/; a web platform where cruisers can evaluate their trip) i.e., cabins, dining, entertainment, public rooms, fitness recreation, enrichment, service and value for money. It is important to note that these aspects have been validated as important for customers by the relevant literature as well (see, e.g., Zhang et al., 2015). CruiseCritic asks users to evaluate their satisfaction level with the aforementioned aspects of their cruise on a 5-point Likert type scale (ranging from 1 = very dissatisfied to 5 = very satisfied). Moreover, cruisers can share their opinion by narrating the experience of the cruise in a text field and provide background information such as: the name of the ship, the name of the cruise line, the embarkation port, and the date of the cruise.

The data extraction was performed by custom programming code, written in PHP (Hypertext Preprocessor) programming language, a popular scripting language targeting mainly web development. The code works in a way similar to the one used by search engines to automatically index and analyze the content of a website's pages. The code initially forms a list of all the featured cruise ships and the URLs of the corresponding pages containing the user ratings. The web pages of websites like CruiseCritic are dynamically generated by a web application, utilizing data stored in a database. Thus, all the pages have identical HTML structure, as they are produced by the same HTML template, populated with each cruise ship's rating data. The data extracted into a csv file that was uploaded to the MUSA software in order to perform the multicriteria analysis (an analytical representation of MUSA can be found in Grigoroudis & Siskos, 2010). Totally, 201,513 ratings of 657 vessels were extracted in March 2022.
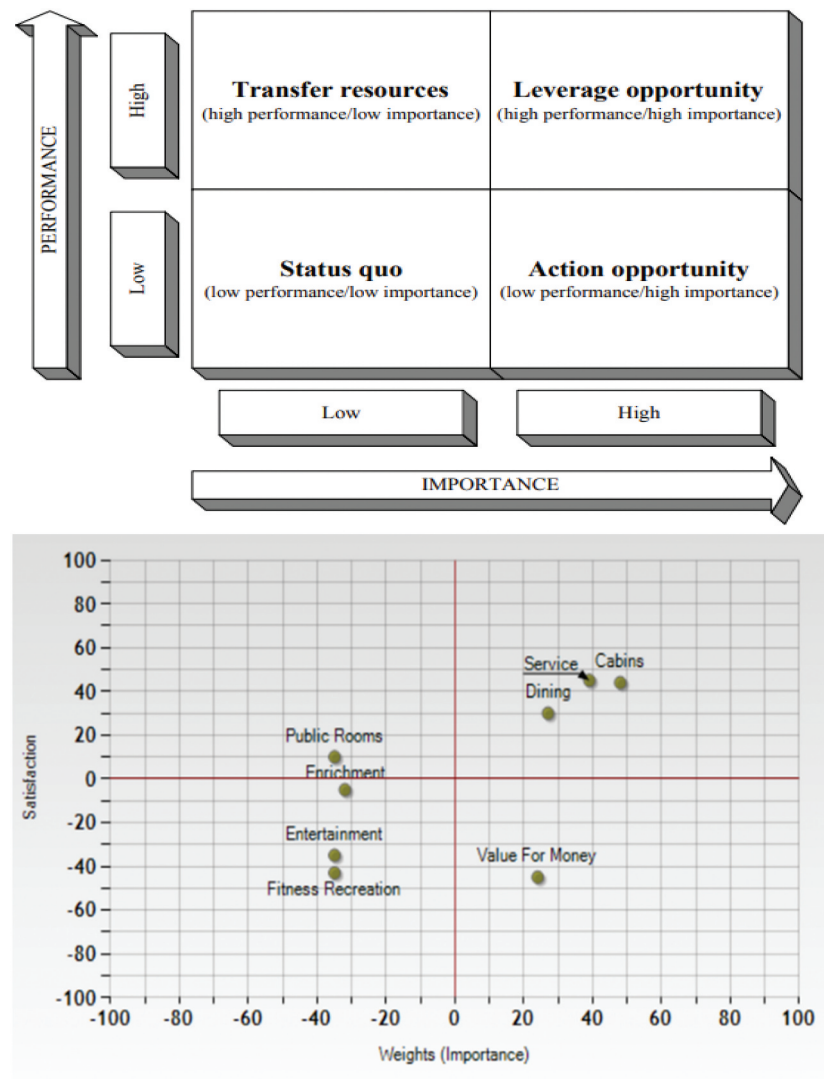
3. Results
The MUSA methodology provides a set of useful (simply presented in graphical form) results like global satisfaction indices, criteria weights and action diagrams which are similar to S.W.O.T (Strengths, Weaknesses, Opportunity, Threats) type analysis in that they highlight the aspects of service that can provide competitive advantage or threaten customer satisfaction and are therefore crucial for decision makers/stakeholders in order to design effective strategic interventions. Global satisfaction indices are average indices that show, in the range 0–100%, the level of global satisfaction of the customers. Therefore, they may be considered as the basic average performance indicators for the business organization (please see, Grigoroudis & Siskos, 2010 for the assessment equation). Our analysis indicated that the highest levels of cruisers' satisfaction are observed on criteria like service (98.27%), cabins (97.9%), and dining (92.74%) and the lowest on criteria like fitness recreation (65.94%) and value for money (65.34%).

Criteria weights represent the relative importance (contribution) of a satisfaction criterion (within the set of the examined criteria) for overall customer satisfaction (please see, Grigoroudis & Siskos, 2010 for the assessment equation). Our results revealed that cabin (25.81%) and service (23.31%) are the most important attributes for cruisers overall satisfaction and consequently decision makers should concentrate their attention on. Value for money (19.16%) and dining (19.85%) are also quite important aspects for cruisers, whilst public rooms (2.76%), entertainment (2.76%), fitness recreation (2.76%), and enrichment (3.57%) are of low importance.

Combining global satisfaction indices (performance) and criteria weights (importance) MUSA produces an action diagram which is divided into four quadrants (Glaveli et al., 2019; Grigoroudis & Siskos, 2010; Manolitzas et al., 2014): i) Status quo (low performance/satisfaction -low importance): no action is required for these aspects of service, given that these satisfaction dimensions are not important for customers, ii) Leverage opportunity (high performance/satisfaction-high importance): The criteria that appear in this area can be used as advantages against competition, iii) Transfer resources (high performance/satisfaction-low importance): Regarding the particular satisfaction attributes, the company's resources may be better used elsewhere (e.g., for improvements of the satisfaction criteria located in the action opportunity quadrant) and, iv) Action opportunity (low performance/satisfaction-high importance): These are the satisfaction criteria where attention should be paid to and improvement effort should be focused on to increase the overall cruisers' satisfaction level.

Based on Figure 1 we observe that dining, service and cabins are the aspects of the cruise experience that appear in the leverage opportunity quadrant suggesting that these are the service attributes that cruise lines perform well at, and also cruisers consider them as important. So, cruise companies that wish to differentiate from their competitors and promote positive e-word of mouth should concentrate their efforts on improving them. The criteria of service and dining have been

Figure 1. Action diagram.

also confirmed as important by other researchers indicating that they are core attributes in the area of cruisers' satisfaction (Krieger et al., 2005; Petrick et al., 2006; Zhang et al., 2015). Also, the criterion value for money appears in the action opportunity quadrant indicating that cruise companies' investment in this area can significantly boost overall cruisers satisfaction. Finally, enrichment, entertainment, and fitness recreation, to our surprise and in contrast to other authors' findings (e.g., Zhang et al., 2015), are the aspects of service that although cruise lines do not perform highly at, they are not important for cruisers' satisfaction as well. Nevertheless, it should be noted that in terms of S.W.O.T. analysis they can threaten cruisers' satisfaction level in the near future (given that their importance may change), thus they need to be closely monitored.

4. Conclusions

The current research contributes to the theory on cruisers' satisfaction by re-examining the issue in the context of online UGC through the application of MUSA an MCDA approach to data analysis. From a managerial point of view, it illustrates an evidence-based decision-making approach in the areas of quality management and cruisers' satisfaction and reveals valuable information to the decision-makers like global satisfaction indices, criteria weights and action diagrams to support them to restart and improve the performance of the cruise industry at the post pandemic era. More precisely, the analysis elucidated that the cruise industry should: i) reconsider the "value for money" aspect of the service offering, ii) continue investing in areas of service quality like cabins, service, and dining and iii) closely monitor the fitness recreation, entertainment, and enrichment aspects of the cruisers' experience because they may turn into threats for customer satisfaction in the future. Possibly, future research should focus on collecting, as well as understanding the impact of cruisers' characteristics and type of ship on cruisers' satisfaction.

Author details
Panagiotis Manolitzas[1]
E-mail: pmanol@gmail.com
Niki Glaveli[2]
Stergios Palamas[3]
Evangelos Grigoroudis[4]
Constantin Zopounidis[4]
[1] Department of Tourism, Ionian University, Corfu, Greece.
[2] Department of Business Administration, University of the Aegean, Chios, Greece.
[3] Department of Regional Development, Ionian University, Lefkada, Greece.
[4] Department of Production Engineering and Management, Technical University of Crete, Chania-Crete, Greece.

References
Arasli, H., Saydam, M. B., & Kilic, H. (2020). Cruise travelers' service perceptions: A critical content analysis. *Sustainability*, 12(17), 6702. https://doi.org/10.3390/su12176702

Buzova, D., Sanz-Blas, S., & Cervera-Taulet, A. (2019). 'Tour me onshore': Understanding cruise tourists' evaluation of shore excursions through text mining. *Journal of Tourism and Cultural Change*, 17(3), 356–373. https://doi.org/10.1080/14766825.2018.1552277

Castillo-Manzano, J. I., Castro-Nuño, M., & Pozo-Barajas, R. (2022). Addicted to cruises? Key drivers of cruise ship loyalty behavior through an e-WOM approach. *International Journal of Contemporary Hospitality Management*, 34(1), 361–381. https://doi.org/10.1108/IJCHM-05-2021-0642

Castillo-Manzano, J. I., & López-Valpuesta, L. (2018). What does cruise passengers' satisfaction depend on? Does size really matter? *International Journal of Hospitality Management*, 75, 116–118. https://doi.org/10.1016/j.ijhm.2018.03.013

CLIA. (2022). State of the Cruise Industry Outlook 2022. Retrieved from https://cruising.org/en-gb/news-and-research/research/2022/january/state-of-the-cruise-industry-outlook-2022

Glaveli, N., Grigoroudis, E., & Manolitzas, P. (2019). Practical application of MSQ and MUSA methodology in determining critical job satisfaction factors of seasonal employees in summer destination luxury resorts. *Tourism Management*, 74, 426–437. https://doi.org/10.1016/j.tourman.2019.04.020

Grigoroudis, E., & Siskos, Y. (2010). *MUSA: Multicriteria satisfaction analysis. In customer satisfaction evaluation* (pp. 91–121). Springer.

Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work* (2nd ed.). John Wiley & Sons.

Hsu, C. H. C., & Li, M. (2017). Development of a cruise motivation scale for emerging markets in Asia. *International Journal of Tourism Research*, 19(6), 682–692. https://doi.org/10.1002/jtr.2140

Jacquet-Lagreze, E., & Siskos, Y. (2001). Preference disaggregation: 20 years of MCDA experience. *European Journal of Operational Research*, 130(2), 233–245. https://doi.org/10.1016/S0377-2217(00)00035-7

Klein, R. A., Lück, M., & Poulston, J. (2017). Passengers and risk: Health, wellbeing and liability. *Cruise Ship Tourism*, (Ed. 2), 106–123. https://doi.org/10.1079/9781780646084.0106

Krieger, B., Moskowitz, H., & Rabino, S. (2005). What customers want from a cruise vacation: Using internet-

enabled conjoint analysis to understand the customer's mind. *Journal of Hospitality and Leisure Marketing, 13*(1), 83–111. https://doi.org/10.1300/J150v13n01_06

Kwortnik, R. J. (2008). Shipscape influence on the leisure cruise experience. *International Journal of Culture, Tourism and Hospitality Research, 2*(4), 289–311. https://doi.org/10.1108/17506180810908961

Manolitzas, P., Fortsas, V., Grigoroudis, E., & Matsatsinis, N. (2014). Internal customer satisfaction in health-care organizations: A multicriteria analysis approach. *International Journal of Public Administration, 37*(10), 646–654. https://doi.org/10.1080/01900692.2014.903267

Mileski, J. P., Wang, G., & Beacham, L. L., IV. (2014). Understanding the causes of recent cruise ship mishaps and disasters. *Research in Transportation Business & Management, 13*, 65–70. https://doi.org/10.1016/j.rtbm.2014.12.001

Mouchtouri, V. A., & Rudge, J. W. (2015). Legionnaires' disease in hotels and passenger ships: A systematic review of evidence, sources, and contributing factors. *Journal of Travel Medicine, 22*(5), 325–337. https://doi.org/10.1111/jtm.12225

Petrick, J. F., Tonner, C., & Quinn, C. (2006). The utilization of critical incident technique to examine cruise passengers' repurchase intentions. *Journal of Travel Research, 44*(3), 273–280. https://doi.org/10.1177/0047287505282944

Radić, A. (2015). Crisis management in cruise tourism: A case study of Dubrovnik. *Academica Turistica, 8*(2), 29–108. https://econpapers.repec.org/article/prpjattij/v_3a8_3ay_3a2015_3ai_3a2_3ap_3a29-44.htm

Radić, A., Law, R., Lück, M., Kang, H., Ariza-Montes, A., Arjona-Fuentes, J. M., & Han, H. (2020). Apocalypse now or overreaction to coronavirus: The global cruise tourism industry crisis. *Sustainability, 12*(17), 6968. https://doi.org/10.3390/su12176968

Zhang, Z., Ye, Q., Song, H., & Liu, T. (2015). The structure of customer satisfaction with cruise-line services: An empirical investigation based on online word of mouth. *Current Issues in Tourism, 18*(5), 450–464. https://doi.org/10.1080/13683500.2013.776020

Zhang, Z., Ye, Q., Song, H., & Liu, T. (2015). The structure of customer satisfaction with cruise-line services: An empirical investigation based on online word of mouth. *Current Issues in Tourism, 18*(5), 450–464.